

# Parcel E Remedial Design Scope

Hunters Point Naval Shipyard  
BCT Meeting

*August 7, 2014*

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## Presentation Outline



- **Components of selected remedy**
- **Pre-design investigation**
- **Schedule**

## Components of Selected Remedy



The Parcel E Record of Decision (December 2013) identified the following key components to address contaminated media at Parcel E:

### **Soil, Soil Gas, and Shoreline Sediment**

- Removal/disposal of contaminated soil in selected areas
  - Tier 1 (10X RG), Tier 2 (5X RG), and TPH
- Durable covers (asphalt or soil)
  - Covers in part of IR-02 Northwest and IR-03 would also include a protective liner
- Soil vapor extraction at Building 406
- Removal/disposal of contaminated shoreline sediment and installation of shoreline protection (e.g., shoreline revetment)

### **Groundwater**

- In-situ treatment of VOC groundwater plumes
- Below-ground barrier (i.e., slurry wall) in IR-02 Northwest

### **NAPL at IR-03 (Former Oily Waste Ponds)**

- Removal/treatment of contaminated NAPL
- Below-ground barrier and in-situ treatment to address contaminated groundwater

## Components of Selected Remedy (continued)



### **Radionuclides**

- Radiological removal and surveys outside of IR-02 and IR-03 - structures, former building sites, and storm drain and sewer lines
- Radiological removal and surveys within IR-02 and IR-03 - surveys and removal focused on the top 1 foot, followed by soil cover with demarcation layer

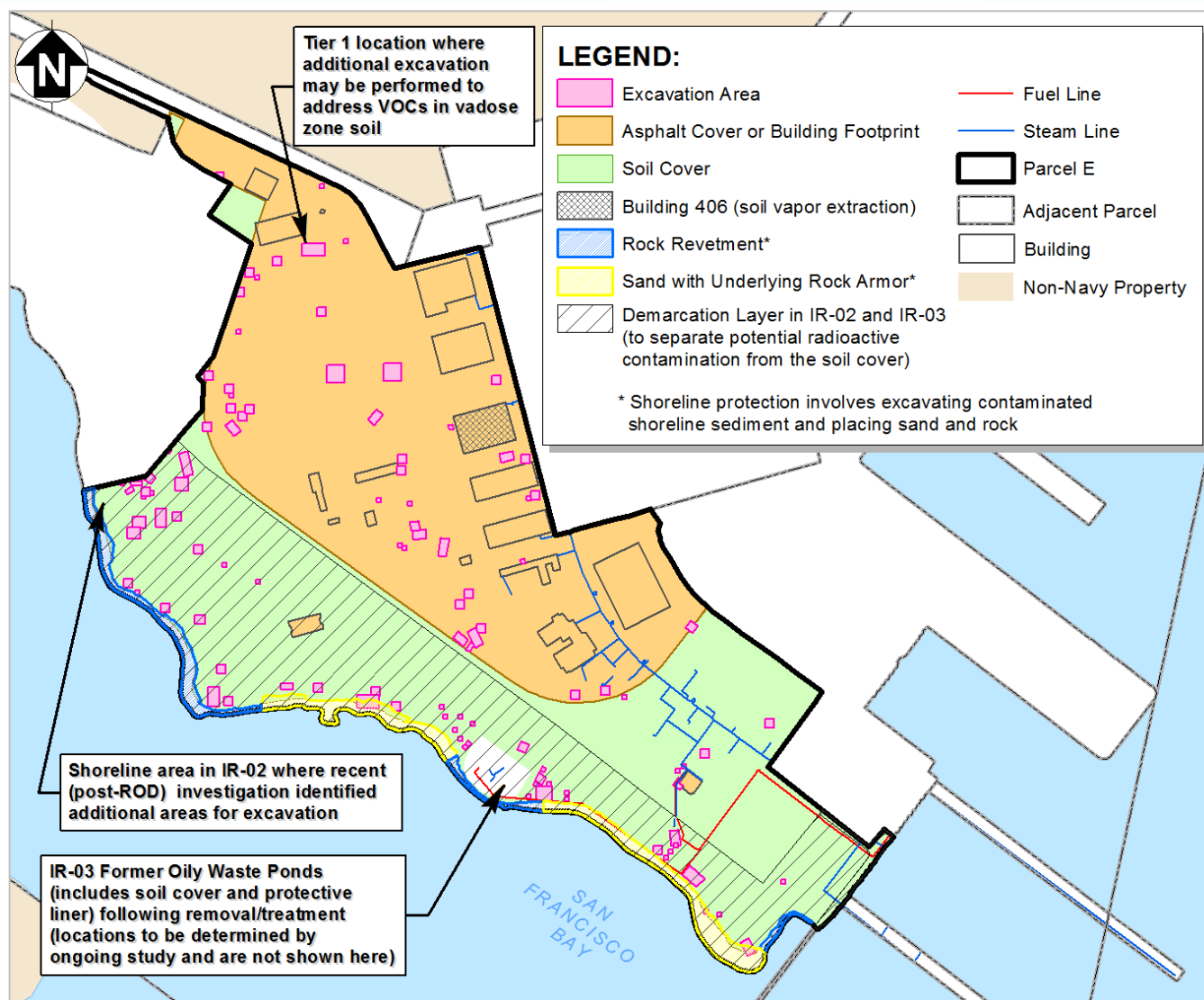
### **Soil Gas and Groundwater Monitoring**

- Soil gas and groundwater monitoring at VOC plumes (following treatment)
- Groundwater monitoring at nearshore plumes

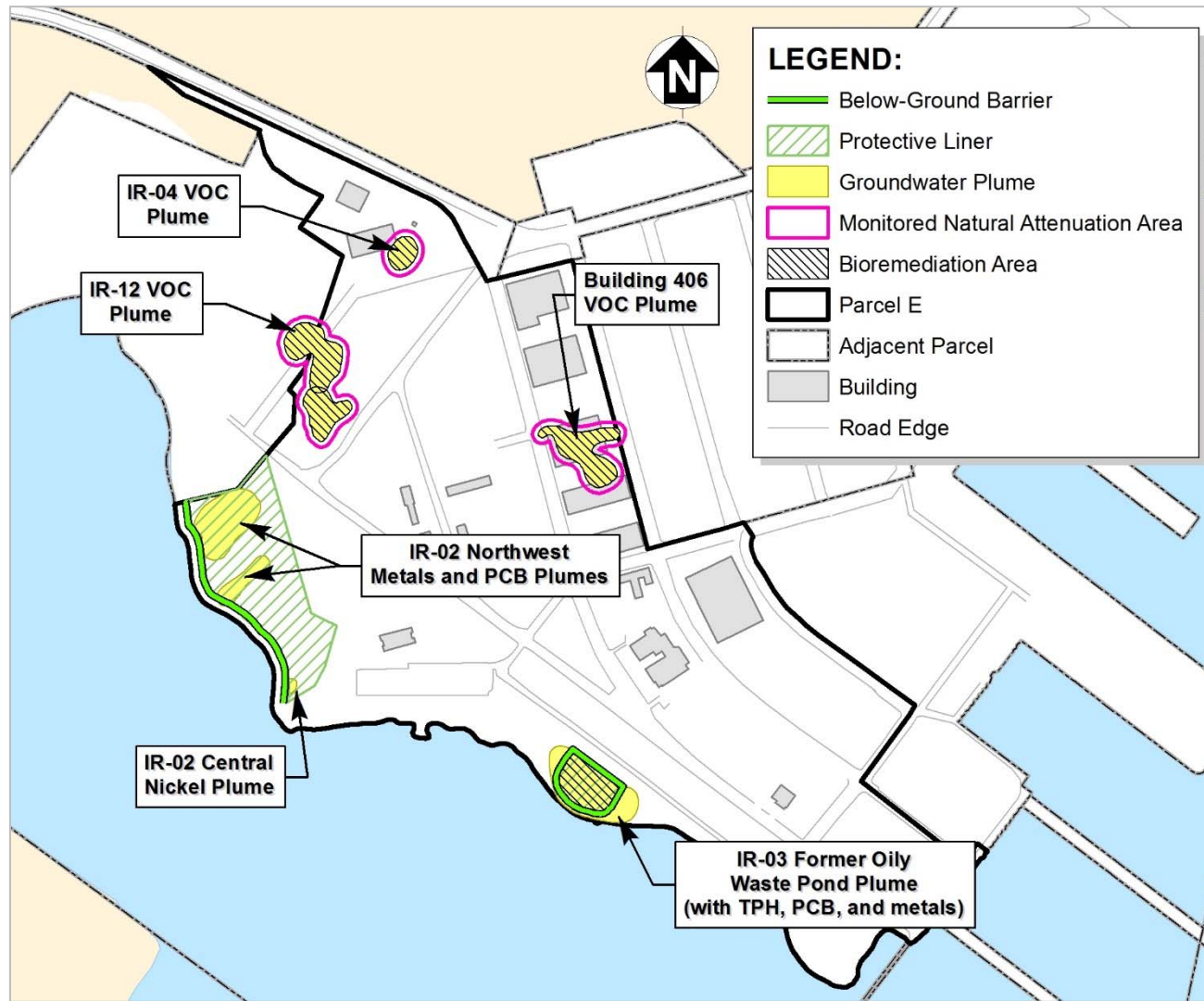
### **Institutional Controls and Maintenance**

- ICs to restrict development, land use, and activities in accordance with ROD, including activity restrictions to prevent exposure to radionuclides remaining at IR-02 and IR-03
- Maintain the remedy components to ensure they are working properly

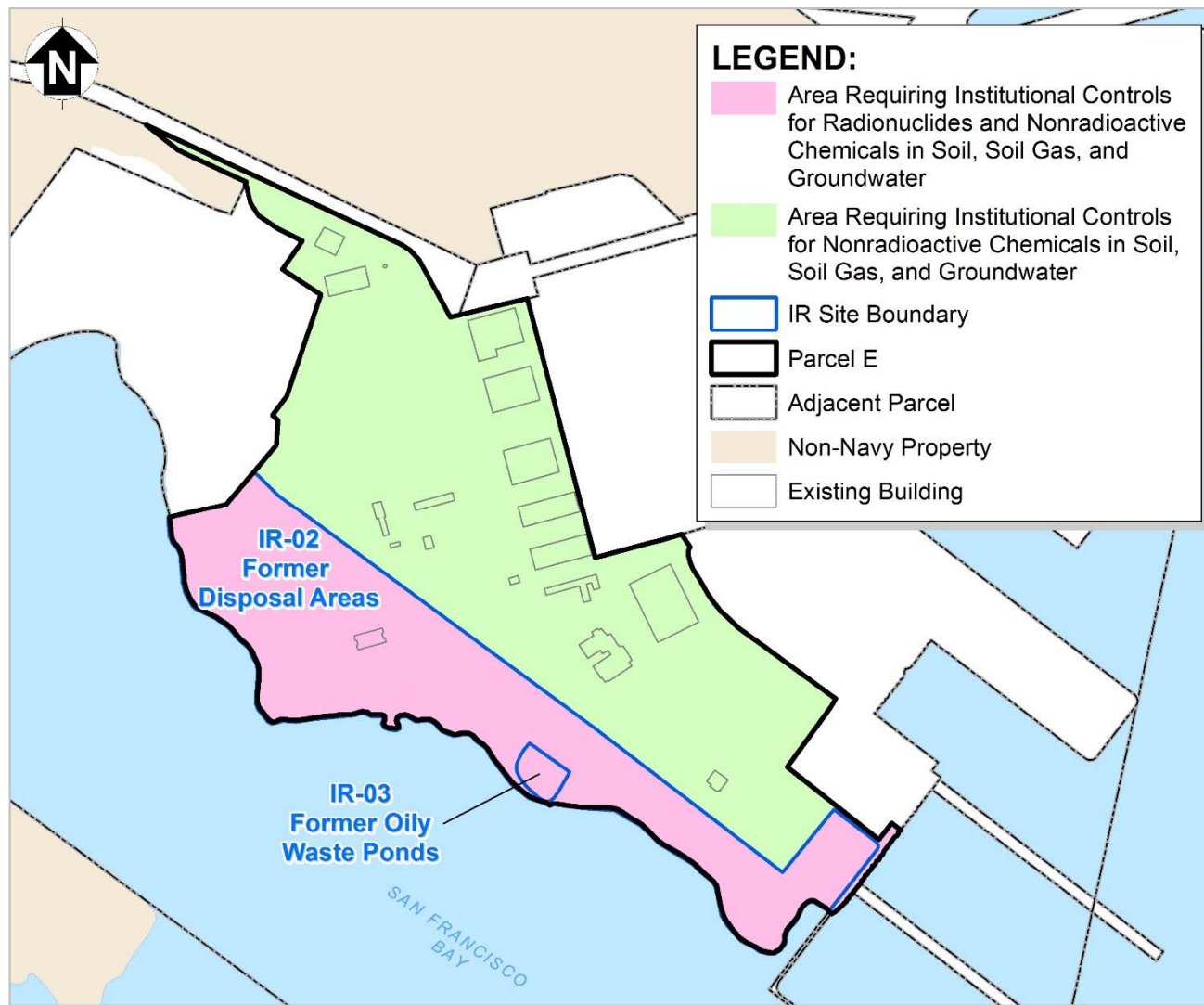
# Components of Selected Remedy (soil, sediment, and soil gas; radionuclides at IR-02/IR-03)



## Components of Selected Remedy (groundwater)



## Components of Selected Remedy (ICs)





## Pre-Design Investigation



The design of the following components requires additional information that will be obtained through a pre-design investigation

### **Durable Covers**

- Soil covers in areas planned for open space (including all of IR-02 and IR-03)
- Protective liner in part of IR-02 Northwest and IR-03
- Asphalt cover in areas planned for mixed use

### **Shoreline Revetment**

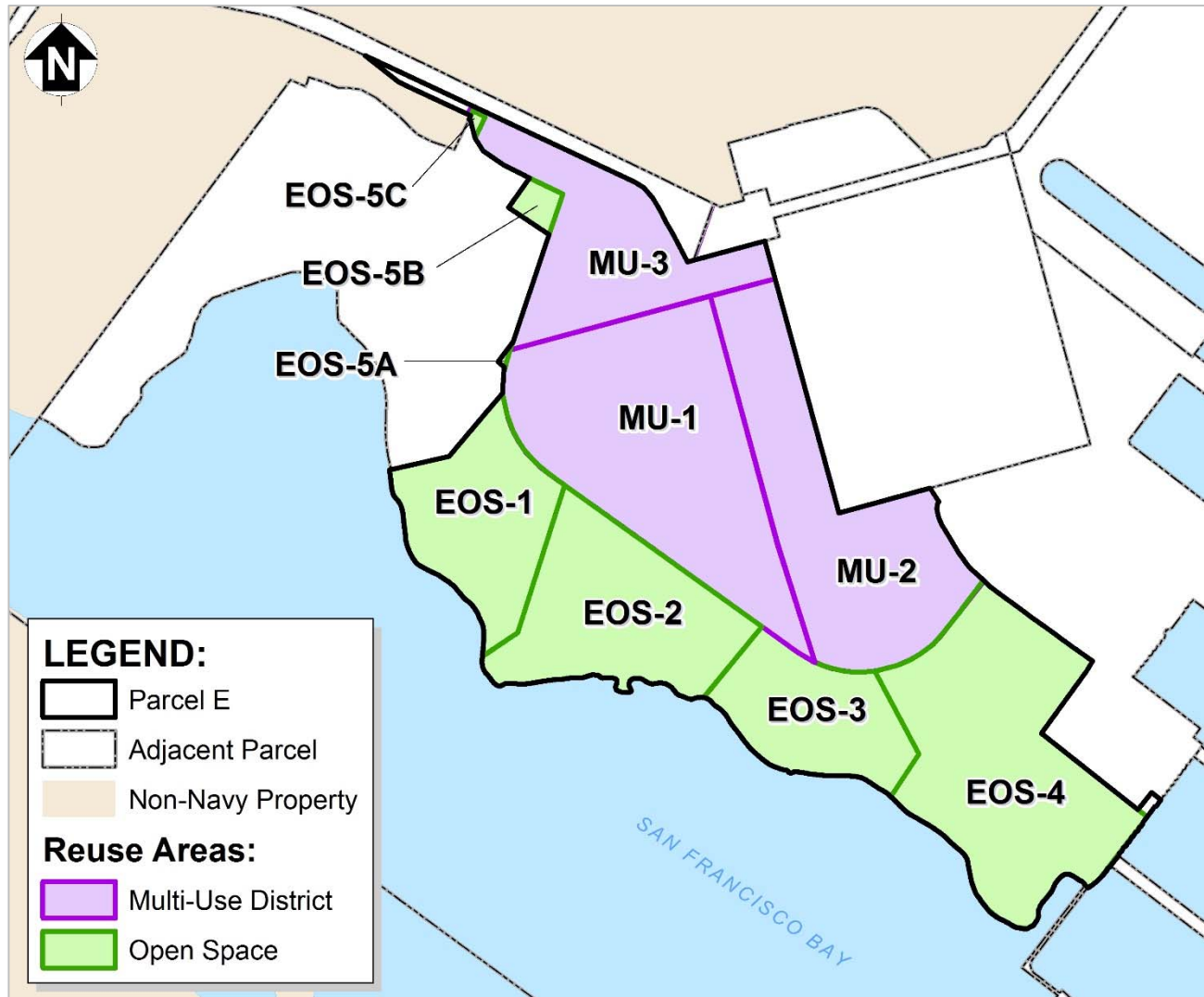
- Along steep and narrow shoreline slopes of IR-02 and IR-03

### **Slurry Wall**

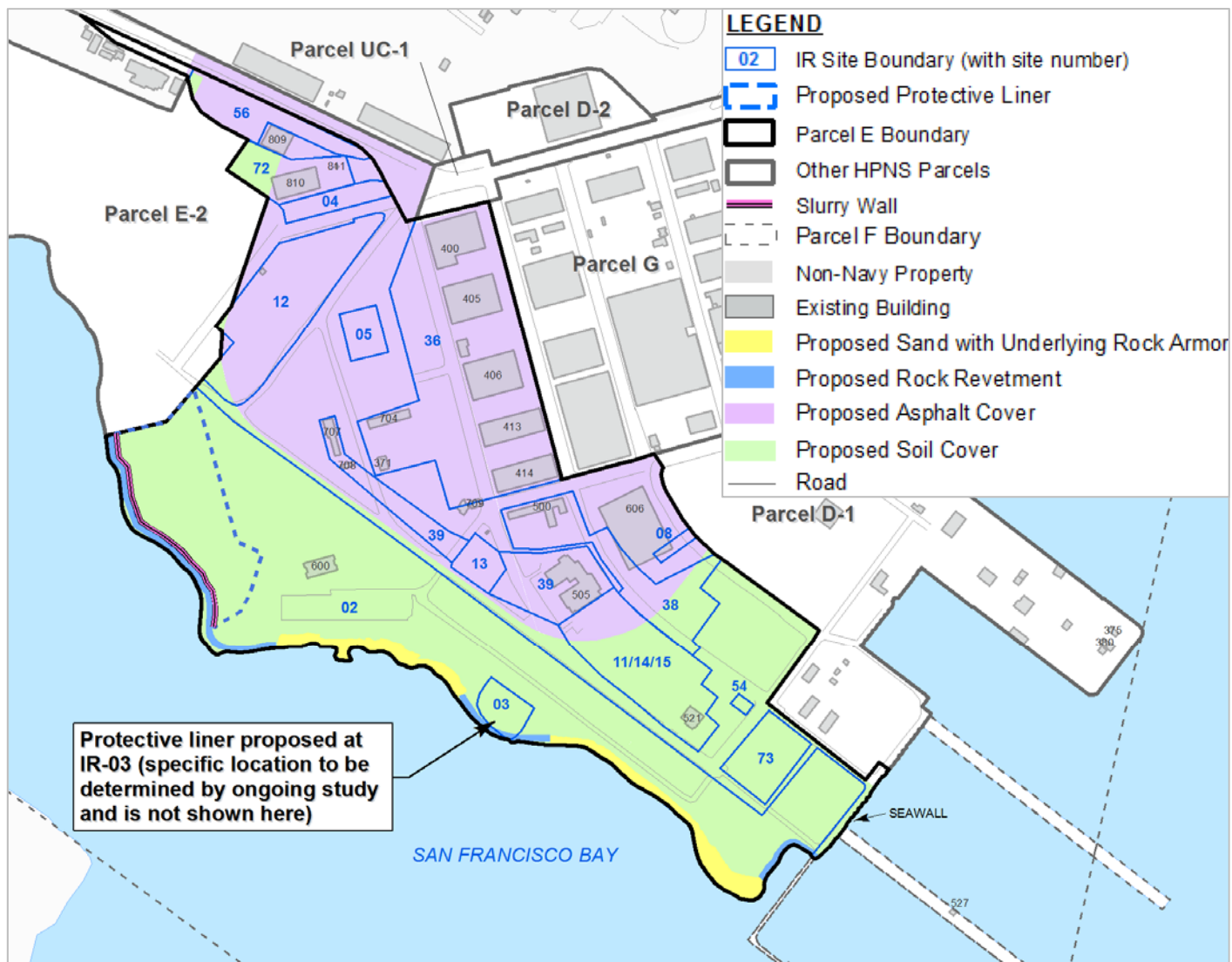
- Adjacent to shoreline at IR-02 Northwest



## Pre-Design Investigation (continued)



## Pre-Design Investigation (continued)



## Pre-Design Investigation (Geotechnical Evaluation)



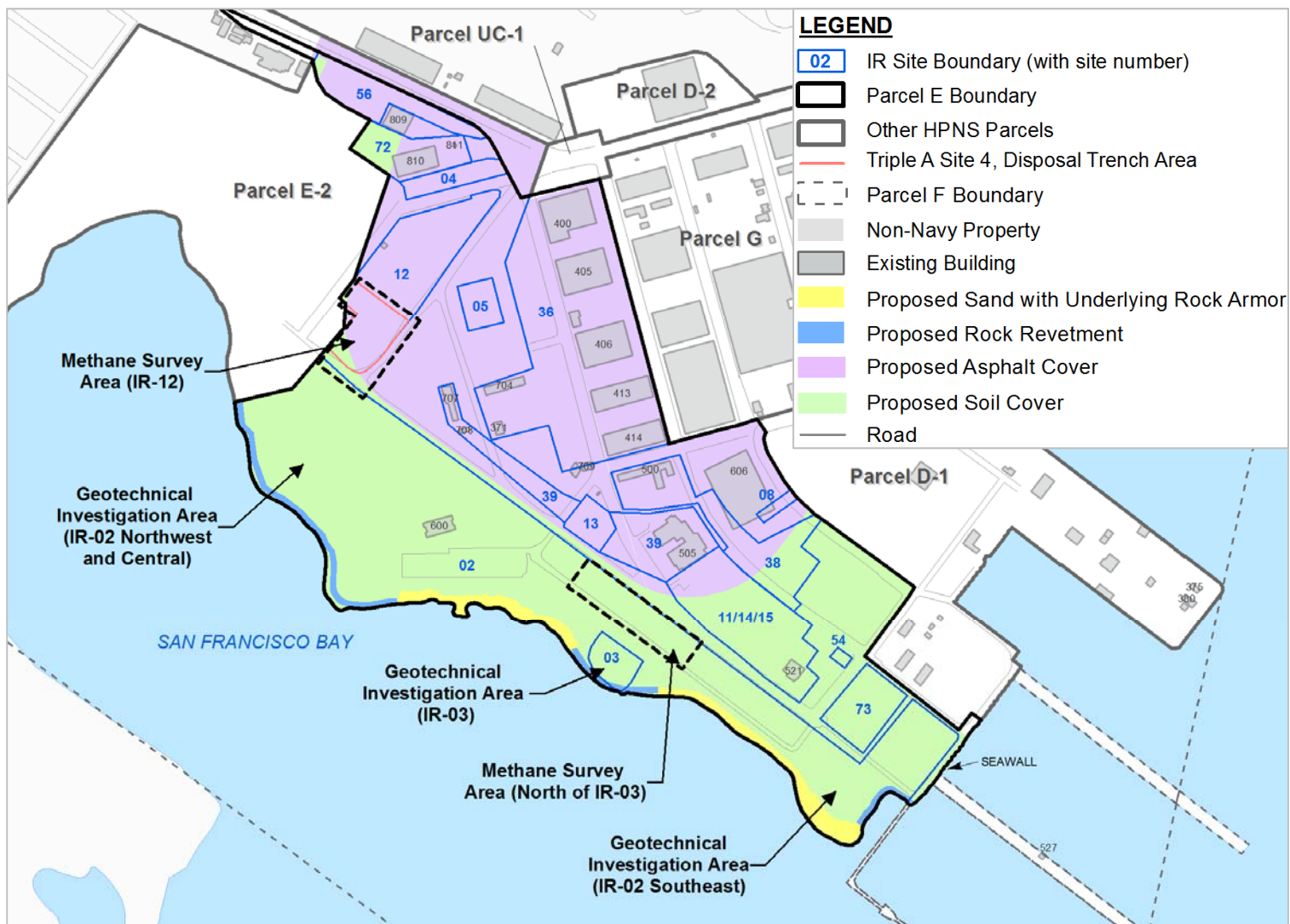
- A geotechnical evaluation is needed to ensure that the durable covers are designed in a manner that accommodates the forces generated by the maximum credible earthquake, as required by Title 22 CCR § 66264.310(a)(5)
  - The geotechnical evaluation will focus on the steep and narrow shoreline slopes at IR Sites 02 and 03 because these areas will represent the most critical slopes of the final cover (based on a similar evaluation performed during the Parcel E-2 remedial design)
- Additional lithologic data will be collected
  - Lithologic data will be collected using up to 24 cone penetration test (CPT) borings and up to 8 drilled geotechnical borings
  - Data will be used (with existing lithologic data) to develop cross sections that will be used to evaluate slope stability
  - Data will also be used to identify installation depths for the slurry wall and to evaluate settlement potential of the final cover
- Laboratory testing of the soft Bay Mud will be performed
  - Relatively undisturbed samples will be collected from drilled geotechnical borings and submitted for laboratory analysis (e.g., moisture content, shear strength, consolidation)
  - Data will be used in the slope stability evaluations that are part of the geotechnical design process (to ensure that the final slopes are stable under both static and seismic loading conditions)

## Scope of Pre-Design Investigation (Methane Survey)



- An evaluation of methane is required at IR-03 and IR-12 to ensure protection of human health, per Title 27 CCR § 20921(a)
  - During an investigation performed in 1988 and 1989, subsurface methane gas was detected in isolated pockets at IR Site 03 and in the southern portion of IR Site 12 (near the former disposal trenches referred to as Triple A Site 4)
  - No available information suggested that subsurface methane was migrating from these locations but further investigation is needed
- Gas monitoring probes will be installed and sampled for methane
  - Each probe will be sampled using field instruments
  - Field readings will be used to identify probes for confirmation sampling and analysis (at an off-site laboratory)
  - If methane exceeding 5 percent by volume is found, the Navy will evaluate the need for mitigative measures in the cover design (e.g., source removal, passive vents, etc.)

## Scope of Pre-Design Investigation (continued)



## Current Schedule



- **Submit Draft Work Plan and SAP for regulatory agency review:  
September 17, 2014**
- **Regulatory agency review:  
September 17 to October 17, 2014**
- **Submit Final Work Plan and SAP with RTCs (tentative):  
December 10, 2014**
- **Perform field investigation (tentative):  
December 10 to December 29, 2014**
- **Submit Draft RD Package (tentative):  
June 26, 2015**